

Table of geologic time

International Commission on Stratigraphy

http://en.wikipedia.org/wiki/Geologic_time_scale

Eon	Era	Period ¹	Series/ Epoch	Major Events	Start, Million Years Ago ²
Phane- rozoic	Cenozoic	Neogene ³	Holocene	End of recent glaciation and rise of modern civilization	0.011430 ± 0.00013 [*]
			Pleistocene	Flourishing and then extinction of many large mammals (Pleistocene megafauna); Evolution of fully modern humans	1.806 ± 0.005 [*]
			Pliocene	Intensification of present ice age. Cool and dry climate; Australopithecines appear, many of the existing genera of mammals, and recent molluscs appear	5.332 ± 0.005 [*]
			Miocene	Moderate climate; Mountain building in northern hemisphere; Modern mammal and bird families became recognizable. Horses and mastodons diverse. Grasses become ubiquitous. First hominoids appear.	23.03 ± 0.05 [*]
		Paleogene ³	Oligocene	Warm climate; Rapid evolution and diversification of fauna, especially mammals. Major evolution and dispersal of modern types of angiosperms	33.9±0.1 [*]
			Eocene	Archaic mammals (e.g. Creodonts, Condylarths, Uintatheres, etc) flourish and continue to develop during the epoch. Appearance of several "modern" mammal families. Primitive whales diversify. First grasses. Reglaciation of Antarctica; start of current ice age.	55.8±0.2 [*]
			Paleocene	Climate tropical. Modern plants; Mammals diversify into a number of primitive lineages following the extinction of the dinosaurs. First large mammals (up to bear or small hippo size)	65.5±0.3 [*]
		Upper/Late	Upper/Late	Flowering plants appear, along with new types of insects. More modern teleost fish begin to appear. Ammonites, belemnites, rudists, echinoids and sponges all common. Many new types of dinosaurs (e.g. Tyrannosaurs, Titanosaurs, duck bills, and horned dinosaurs) evolve on land, as do modern crocodilians; and mosasaurs and modern sharks appear in the sea. Primitive birds gradually replace pterosaurs. Monotremes, marsupials and placental	99.6±0.9 [*]
			Lower/Early		145.5 ± 4.0

				mammals appear. Break up of Gondwana.	
		Jurassic	Upper/Late	Gymnosperms (especially conifers, Bennettitales and cycads) and ferns common. Many types of dinosaurs, such as sauropods, carnosaurs, and stegosaurs. Mammals common but small. First birds and lizards. Ichthyosaurs and plesiosaurs diverse. Bivalves, Ammonites and belemnites abundant. Echinoids very common, also crinoids, starfish, sponges, and terebratulid and rhynchonellid brachiopods. Breakup of Pangea into Gondwana and Laurasia.	161.2 ± 4.0
			Middle		175.6 ± 2.0 *
			Lower/Early		199.6 ± 0.6
		Triassic	Upper/Late	Archosaurs dominant and diverse on land, include many large forms; cynodonts become smaller and more mammal-like. First dinosaurs, mammals, pterosaurs, and crocodilia. Dicroidium flora common on land. Many large aquatic temnospondyl amphibians. Ichthyosaurs and nothosaurs common in the seas. Ceratite ammonoids extremely common. Modern corals and teleost fish appear.	228.0 ± 2.0
			Middle		245.0 ± 1.5
			Lower/Early		251.0 ± 0.4 *
Paleozoic	Permian	Lopingian			260.4 ± 0.7 *
					270.6 ± 0.7 *
		Guadalupian			299.0 ± 0.8 *
	Carboniferous ⁴ / Pennsylvanian	Cisuralian			306.5 ± 1.0
			Upper/Late		311.7 ± 1.1
			Middle		318.1 ± 1.3 *
	Carboniferous ⁴ / Mississippian	Upper/Late			326.4 ± 1.6
			Middle		345.3 ± 2.1
			Lower/Early		359.2 ± 2.5 *

				common; Goniatites common, trilobites and nautiloids in decline. Glaciation in East Gondwana.	
Devonian			Upper/Late	First clubmosses and horsetails appear, progymnosperms (first seed bearing plants) appear, first trees (<i>Archaeopteris</i>). In the sea strophomenid and atrypid brachiopods, rugose and tabulate corals, and crinoids are abundant. Goniatite ammonoids are common, and coleoids appear. Trilobites reduced in numbers. Ostracoderms decline; Jawed fish (Placoderms, lobe-finned and ray-finned fish, and early sharks) important life in the sea. First amphibians (but still aquatic). "Old Red Continent" (Euramerica)	385.3 ± 2.6 *
			Middle		397.5 ± 2.7 *
			Lower/Early		416.0 ± 2.8 *
Silurian		Pridoli			418.7 ± 2.7 *
		Ludlow			422.9 ± 2.5 *
		Wenlock			428.2 ± 2.3 *
		Llandovery			443.7 ± 1.5 *
Ordovician		Upper/Late			460.9 ± 1.6 *
		Middle			471.8 ± 1.6
		Lower/Early			488.3 ± 1.7 *
Cambrian		Furongian			501.0 ± 2.0 *
		Middle			513.0 ± 2.0
		Lower/Early			542.0 ± 1.0 *
Proterozoic ⁵	Neo-proterozoic	Ediacaran		First multi-celled animals. Ediacaran fauna (vendobionta) flourish worldwide. Simple trace fossils from worm-like animals. First sponges.	630 +5/- 30 *
		Cryogenian		Possible snowball Earth period, Rodinia begins to break up	850 ⁶

	Tonian	First acritarch radiation	1000 ⁶
Meso-proterozoic	Stenian	Narrow highly metamorphic belts due to orogeny as Rodinia formed.	1200 ⁶
	Ectasian	Platform covers continue to expand	1400 ⁶
	Calymmian	Platform covers expand	1600 ⁶
Paleo-proterozoic	Statherian	First complex single-celled life. Columbia (supercontinent).	1800 ⁶
	Orosirian	Atmosphere became oxygenic. Vredefort and Sudbury Basin asteroid impacts. Much orogeny.	2050 ⁶
	Rhyacian	Bushveld Formation formed. Huronian glaciation.	2300 ⁶
	Siderian	banded iron formations formed	2500 ⁶
Archean ⁵	Neoarchean	Stabilization of most modern cratons, possible mantle overturn event	2800 ⁶
	Mesoarchean	First stromatolites	3200 ⁶
	Paleoarchean	First known oxygen producing bacteria	3600 ⁶
	Eoarchean	Simple single-celled life	3800
Hadean ^{5,7}	Lower Imbrian		c.3850
	Nectarian		c.3920
	Basin groups	4100 MYA - Oldest known rock	c.4150
	Cryptic ⁸	4400 MYA - Oldest known mineral; 4570 MYA - Formation of Earth	c.4570

1. Paleontologists often refer to faunal stages rather than geologic periods. The stage nomenclature is quite complex. See Harland for an excellent time ordered list of faunal stages.
2. Dates are slightly uncertain with differences of a few percent between various sources being common. This is largely due to uncertainties in radiometric dating and the problem that deposits suitable for radiometric dating seldom occur exactly at the places in the geologic column where they would be most useful. The dates and errors quoted above are according to the International Commission on Stratigraphy 2004 time scale. Dates labeled with a * indicate boundaries where a Global Boundary Stratotype Section and Point has been internationally agreed upon.
3. Historically, the Cenozoic has been divided up into the Quaternary and Tertiary sub-eras, as well as the Neogene and Paleogene periods. However, the International Commission on Stratigraphy has recently decided to stop endorsing the terms Quaternary and Tertiary as part of the formal nomenclature.
4. In North America, the Carboniferous is subdivided into Mississippian and Pennsylvanian Periods.
5. The Proterozoic, Archean and Hadean are often collectively referred to as Precambrian Time, and sometimes also as the Cryptozoic.
6. Defined by absolute age (Global Standard Stratigraphic Age).
7. Though commonly used, the Hadean is not a formal eon and no lower bound for the Eoarchean has been agreed upon. The Hadean has also sometimes been called the Priscoan.
8. These four era names were taken from Moon geology. Their use for Earth geology is unofficial.
9. The start time for the Holocene epoch is here given as 11,430 years ago ± 130 years. For further discussion of the dating of this epoch, see Holocene.